

Section 4

1999 Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes

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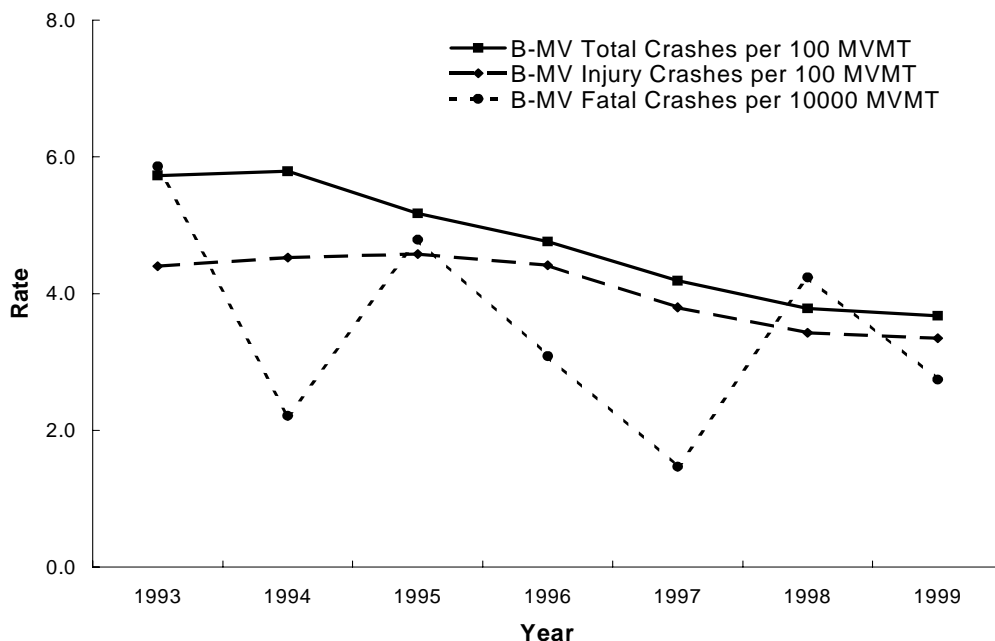
1993 - 1999 Bicyclist-Motor Vehicle Crashes

Table 4.01 and Figure 4.01 shows the trends in bicyclist-motor vehicle (B-MV) crashes for 1993 to 1999. The rates of total bicyclist-motor vehicle crashes and injury crashes have decreased steadily since 1994, while fatal crashes varied year to year. The highest rate of total bicyclist-motor vehicle crashes occurred in 1994, while the highest rate of injury bicyclist-motor vehicle crashes occurred in 1995. The highest rate of fatal bicyclist-motor vehicle crashes occurred in 1993. The small number of bicyclist-motor vehicle fatal crashes makes it difficult to compare increases and decreases from year to year.

Table 4.01 Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 1999

| Year | B-MV Total Crashes | | B-MV Injury Crashes | | B-MV Fatal Crashes | |
|------|--------------------|-------------------|---------------------|-------------------|--------------------|----------------------|
| | # | Rate per 100 MVMT | # | Rate per 100 MVMT | # | Rate per 10,000 MVMT |
| 1993 | 977 | 5.7 | 751 | 4.4 | 10 | 5.9 |
| 1994 | 1,047 | 5.8 | 819 | 4.5 | 4 | 2.2 |
| 1995 | 972 | 5.2 | 860 | 4.6 | 9 | 4.8 |
| 1996 | 925 | 4.8 | 858 | 4.4 | 6 | 3.1 |
| 1997 | 855 | 4.2 | 778 | 3.8 | 3 | 1.5 |
| 1998 | 804 | 3.8 | 728 | 3.4 | 9 | 4.2 |
| 1999 | 804 | 3.7 | 732 | 3.3 | 6 | 2.7 |

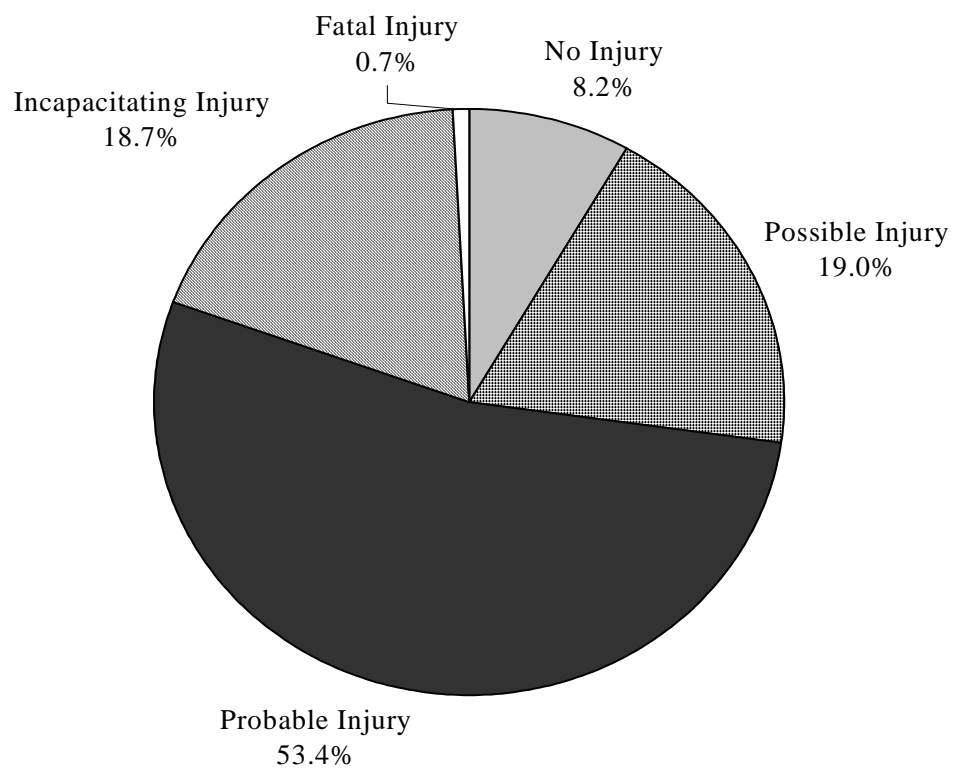
Figure 4.01 Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 1999



1999 Bicyclist-Motor Vehicle Crash Severity

Figure 4.02 shows the breakdown of bicyclist-motor vehicle crash severity. Almost all bicyclist-motor vehicle crashes resulted in an injury (91.8%) compared to 37.6% of all motor vehicle crashes. However, bicyclist-motor vehicle crashes resulted in a similar percentage (0.7%) of death compared to all motor vehicle crashes (0.6%).

Figure 4.02 Severity of Bicyclist-Motor Vehicle Crashes as Reported by Police, Utah 1999 (n=804)



1999 Bicyclist-Motor Vehicle Crashes by County

The rates of total bicycle-involved motor vehicle crashes, injury crashes and fatal crashes by county are shown in Table 4.02. There are two different rates given; one based on population of the county, and another on the miles traveled in the county. The top three counties for total bicyclist-involved motor vehicle crashes and injury crashes based on miles traveled were Utah, Salt Lake, and Cache. The highest rate of fatal bicyclist-motor vehicle crashes based on miles traveled occurred in Uintah County.

Table 4.02 Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 1999

| County | B-MV Total Crashes | | | B-MV Injury Crashes | | | B-MV Fatal Crashes | | |
|------------|--------------------|----------|------------|---------------------|----------|------------|--------------------|----------|------------|
| | # | Rate per | Rate per | # | Rate per | Rate per | # | Rate per | Rate per |
| | | 100 | 100,000 | | 100 | 100,000 | | 10000 | 100,000 |
| | | MVMT | Population | | MVMT | Population | | MVMT | Population |
| Beaver | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Box Elder | 5 | 0.6 | 1.2 | 5 | 0.6 | 1.2 | 0 | 0.0 | 0.0 |
| Cache | 35 | 4.6 | 3.9 | 34 | 4.5 | 3.8 | 0 | 0.0 | 0.0 |
| Carbon | 5 | 1.4 | 2.3 | 5 | 1.4 | 2.3 | 0 | 0.0 | 0.0 |
| Daggett | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Davis | 70 | 3.5 | 3.1 | 64 | 3.2 | 2.8 | 0 | 0.0 | 0.0 |
| Duchesne | 4 | 2.2 | 2.8 | 4 | 2.2 | 2.8 | 0 | 0.0 | 0.0 |
| Emery | 1 | 0.3 | 0.9 | 1 | 0.3 | 0.9 | 0 | 0.0 | 0.0 |
| Garfield | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Grand | 6 | 2.2 | 6.0 | 6 | 2.2 | 6.0 | 0 | 0.0 | 0.0 |
| Iron | 8 | 1.5 | 2.5 | 8 | 1.5 | 2.5 | 0 | 0.0 | 0.0 |
| Juab | 2 | 0.6 | 2.5 | 2 | 0.6 | 2.5 | 0 | 0.0 | 0.0 |
| Kane | 1 | 0.8 | 1.4 | 1 | 0.8 | 1.4 | 0 | 0.0 | 0.0 |
| Millard | 1 | 0.2 | 0.8 | 1 | 0.2 | 0.8 | 0 | 0.0 | 0.0 |
| Morgan | 1 | 0.9 | 1.5 | 1 | 0.9 | 1.5 | 0 | 0.0 | 0.0 |
| Piute | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Rich | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Salt Lake | 400 | 5.6 | 4.7 | 356 | 4.9 | 4.2 | 4 | 5.6 | 0.5 |
| San Juan | 3 | 1.2 | 2.3 | 3 | 1.2 | 2.3 | 0 | 0.0 | 0.0 |
| Sanpete | 3 | 1.3 | 1.4 | 3 | 1.3 | 1.4 | 0 | 0.0 | 0.0 |
| Sevier | 3 | 0.8 | 1.6 | 3 | 0.8 | 1.6 | 0 | 0.0 | 0.0 |
| Summit | 2 | 0.3 | 0.8 | 2 | 0.3 | 0.8 | 0 | 0.0 | 0.0 |
| Tooele | 6 | 0.9 | 1.8 | 6 | 0.9 | 1.8 | 0 | 0.0 | 0.0 |
| Uintah | 5 | 1.8 | 2.0 | 4 | 1.5 | 1.6 | 1 | 36.7 | 4.1 |
| Utah | 171 | 5.8 | 5.1 | 159 | 5.4 | 4.8 | 1 | 3.4 | 0.3 |
| Wasatch | 5 | 2.1 | 3.7 | 5 | 2.1 | 3.7 | 0 | 0.0 | 0.0 |
| Washington | 19 | 2.3 | 2.4 | 19 | 2.3 | 2.4 | 0 | 0.0 | 0.0 |
| Wayne | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Weber | 48 | 3.2 | 2.6 | 40 | 2.7 | 2.2 | 0 | 0.0 | 0.0 |
| Statewide | 804 | 3.7 | 3.8 | 732 | 3.3 | 3.5 | 6 | 2.7 | 0.3 |

Table 4.03 compares the rates of bicyclist-motor vehicle crashes in 1999 to 1998 by county. Most counties experienced only slight changes in total bicyclist-motor vehicle crashes and injury crashes from 1998 to 1999.

Table 4.03. Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 1998 - 1999

| County | B-MV Total Crashes | | | | B-MV Injury Crashes | | | | B-MV Fatal Crashes | | | |
|------------|--------------------|-------------------|------|-------------------|---------------------|-------------------|------|-------------------|--------------------|---------------------|------|---------------------|
| | 1998 | | 1999 | | 1998 | | 1999 | | 1998 | | 1999 | |
| | # | Rate per 100 MVMT | # | Rate per 100 MVMT | # | Rate per 100 MVMT | # | Rate per 100 MVMT | # | Rate per 10000 MVMT | # | Rate per 10000 MVMT |
| Beaver | 3 | 1.5 | 0 | 0.0 | 3 | 1.5 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Box Elder | 10 | 1.2 | 5 | 0.6 | 9 | 1.0 | 5 | 0.6 | 1 | 11.6 | 0 | 0.0 |
| Cache | 39 | 5.3 | 35 | 4.6 | 36 | 4.9 | 34 | 4.5 | 0 | 0.0 | 0 | 0.0 |
| Carbon | 5 | 1.5 | 5 | 1.4 | 4 | 1.2 | 5 | 1.4 | 1 | 29.8 | 0 | 0.0 |
| Daggett | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Davis | 45 | 2.3 | 70 | 3.5 | 41 | 2.1 | 64 | 3.2 | 1 | 5.1 | 0 | 0.0 |
| Duchesne | 0 | 0.0 | 4 | 2.2 | 0 | 0.0 | 4 | 2.2 | 0 | 0.0 | 0 | 0.0 |
| Emery | 0 | 0.0 | 1 | 0.3 | 0 | 0.0 | 1 | 0.3 | 0 | 0.0 | 0 | 0.0 |
| Garfield | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Grand | 6 | 2.3 | 6 | 2.2 | 6 | 2.3 | 6 | 2.2 | 0 | 0.0 | 0 | 0.0 |
| Iron | 5 | 0.9 | 8 | 1.5 | 5 | 0.9 | 8 | 1.5 | 0 | 0.0 | 0 | 0.0 |
| Juab | 2 | 0.6 | 2 | 0.6 | 1 | 0.3 | 2 | 0.6 | 1 | 31.3 | 0 | 0.0 |
| Kane | 0 | 0.0 | 1 | 0.8 | 0 | 0.0 | 1 | 0.8 | 0 | 0.0 | 0 | 0.0 |
| Millard | 3 | 0.8 | 1 | 0.2 | 2 | 0.5 | 1 | 0.2 | 0 | 0.0 | 0 | 0.0 |
| Morgan | 0 | 0.0 | 1 | 0.9 | 0 | 0.0 | 1 | 0.9 | 0 | 0.0 | 0 | 0.0 |
| Piute | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Rich | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Salt Lake | 414 | 5.9 | 400 | 5.6 | 367 | 5.2 | 356 | 4.9 | 3 | 4.2 | 4 | 5.6 |
| San Juan | 0 | 0.0 | 3 | 1.2 | 0 | 0.0 | 3 | 1.2 | 0 | 0.0 | 0 | 0.0 |
| Sanpete | 1 | 0.5 | 3 | 1.3 | 0 | 0.0 | 3 | 1.3 | 0 | 0.0 | 0 | 0.0 |
| Sevier | 2 | 0.6 | 3 | 0.8 | 2 | 0.6 | 3 | 0.8 | 0 | 0.0 | 0 | 0.0 |
| Summit | 0 | 0.0 | 2 | 0.3 | 0 | 0.0 | 2 | 0.3 | 0 | 0.0 | 0 | 0.0 |
| Tooele | 1 | 0.2 | 6 | 0.9 | 1 | 0.2 | 6 | 0.9 | 0 | 0.0 | 0 | 0.0 |
| Uintah | 6 | 2.1 | 5 | 1.8 | 6 | 2.1 | 4 | 1.5 | 0 | 0.0 | 1 | 36.7 |
| Utah | 166 | 6.0 | 171 | 5.8 | 158 | 5.7 | 159 | 5.4 | 0 | 0.0 | 1 | 3.4 |
| Wasatch | 3 | 1.3 | 5 | 2.1 | 2 | 0.9 | 5 | 2.1 | 0 | 0.0 | 0 | 0.0 |
| Washington | 28 | 3.3 | 19 | 2.3 | 25 | 2.9 | 19 | 2.3 | 2 | 23.5 | 0 | 0.0 |
| Wayne | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Weber | 65 | 4.6 | 48 | 3.2 | 60 | 4.3 | 40 | 2.7 | 0 | 0.0 | 0 | 0.0 |
| Statewide | 804 | 3.8 | 804 | 3.7 | 728 | 3.4 | 732 | 3.4 | 9 | 4.2 | 6 | 2.8 |

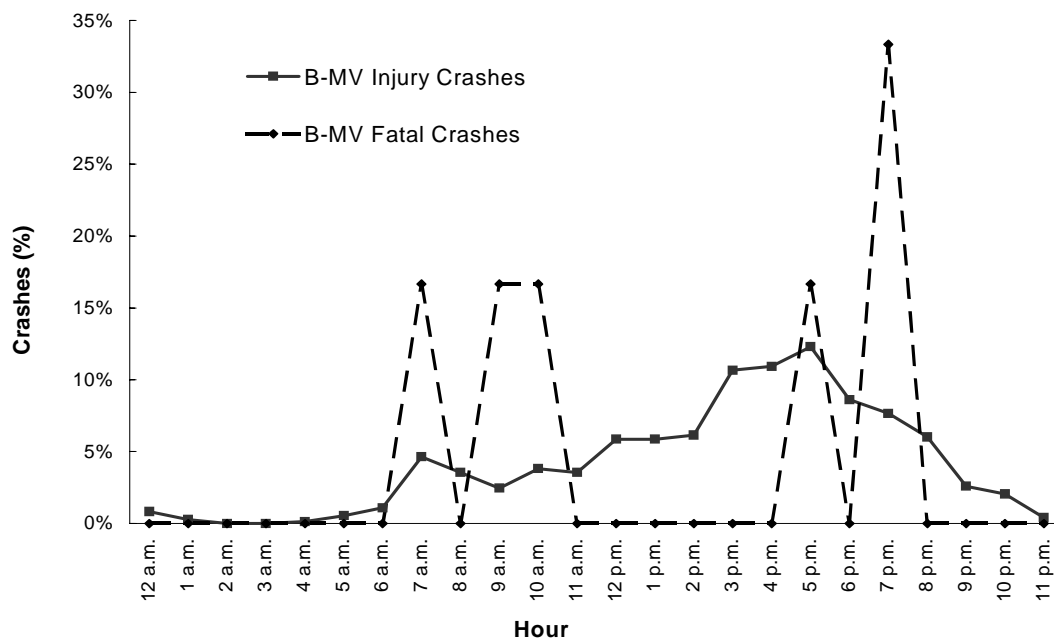
1999 Bicyclist-Motor Vehicle Crash Times

Table 4.04 and Figure 4.03 show that total bicyclist-motor vehicle crashes and injury crashes peaked during the late afternoon and early evening hours (3 p.m. to 6 p.m.).

Table 4.04 Hour of Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

| Hour | B-MV Total Crashes | | B-MV Injury Crashes | | B-MV Fatal Crashes | |
|-------------|--------------------|--------|---------------------|--------|--------------------|--------|
| | # | % | # | % | # | % |
| 12 a.m. | 6 | 0.7% | 6 | 0.8% | 0 | 0.0% |
| 1 a.m. | 2 | 0.2% | 2 | 0.3% | 0 | 0.0% |
| 2 a.m. | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 3 a.m. | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 4 a.m. | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| 5 a.m. | 4 | 0.5% | 4 | 0.5% | 0 | 0.0% |
| 6 a.m. | 9 | 1.1% | 8 | 1.1% | 0 | 0.0% |
| 7 a.m. | 36 | 4.5% | 34 | 4.6% | 1 | 16.7% |
| 8 a.m. | 26 | 3.2% | 26 | 3.6% | 0 | 0.0% |
| 9 a.m. | 19 | 2.4% | 18 | 2.5% | 1 | 16.7% |
| 10 a.m. | 31 | 3.9% | 28 | 3.8% | 1 | 16.7% |
| 11 a.m. | 28 | 3.5% | 26 | 3.6% | 0 | 0.0% |
| 12 p.m. | 48 | 6.0% | 43 | 5.9% | 0 | 0.0% |
| 1 p.m. | 48 | 6.0% | 43 | 5.9% | 0 | 0.0% |
| 2 p.m. | 47 | 5.8% | 45 | 6.1% | 0 | 0.0% |
| 3 p.m. | 80 | 10.0% | 78 | 10.7% | 0 | 0.0% |
| 4 p.m. | 94 | 11.7% | 80 | 10.9% | 0 | 0.0% |
| 5 p.m. | 103 | 12.8% | 90 | 12.3% | 1 | 16.7% |
| 6 p.m. | 68 | 8.5% | 63 | 8.6% | 0 | 0.0% |
| 7 p.m. | 64 | 8.0% | 56 | 7.7% | 2 | 33.3% |
| 8 p.m. | 49 | 6.1% | 44 | 6.0% | 0 | 0.0% |
| 9 p.m. | 22 | 2.7% | 19 | 2.6% | 0 | 0.0% |
| 10 p.m. | 15 | 1.9% | 15 | 2.0% | 0 | 0.0% |
| 11 p.m. | 4 | 0.5% | 3 | 0.4% | 0 | 0.0% |
| Grand Total | 804 | 100.0% | 732 | 100.0% | 6 | 100.0% |

Figure 4.03 Hour of Bicyclist-Motor Vehicle (B-MV) Injury Crashes and Fatal Crashes, Utah 1999 (See Table 4.04 for values)



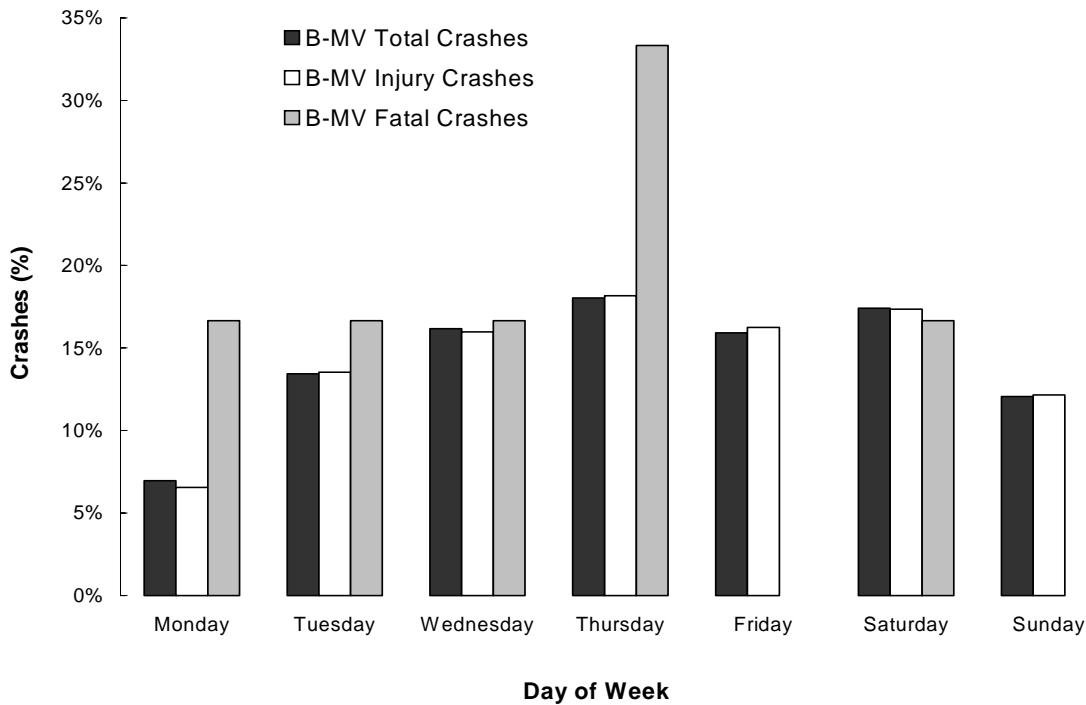
Summer months (June, July, August) had the highest rates of total bicyclist-motor vehicle crashes and injury crashes per day (Table 4.05).

Table 4.05 Month of Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

| Crash Month | B-MV Total Crashes | | B-MV Injury Crashes | | B-MV Fatal Crashes | |
|-------------|--------------------|--------------|---------------------|--------------|--------------------|--------------|
| | # | Rate per Day | # | Rate per Day | # | Rate per Day |
| January | 25 | 0.8 | 21 | 0.7 | 0 | 0.0 |
| February | 17 | 0.6 | 16 | 0.6 | 0 | 0.0 |
| March | 52 | 1.7 | 46 | 1.5 | 1 | 0.0 |
| April | 59 | 2.0 | 57 | 1.9 | 1 | 0.0 |
| May | 81 | 2.6 | 73 | 2.4 | 0 | 0.0 |
| June | 107 | 3.6 | 97 | 3.2 | 1 | 0.0 |
| July | 118 | 3.8 | 104 | 3.4 | 1 | 0.0 |
| August | 118 | 3.8 | 111 | 3.6 | 0 | 0.0 |
| September | 104 | 3.5 | 94 | 3.1 | 1 | 0.0 |
| October | 64 | 2.1 | 61 | 2.0 | 1 | 0.0 |
| November | 41 | 1.4 | 37 | 1.2 | 0 | 0.0 |
| December | 18 | 0.6 | 15 | 0.5 | 0 | 0.0 |
| Grand Total | 804 | 2.2 | 732 | 2.0 | 6 | 0.0 |

Figure 4.04 and Table 4.06 show the highest percentage of total bicyclist-motor vehicle crashes and injury crashes occurred on Thursday and Saturday, while the lowest number occurred on Monday. One-third of fatal bicyclist-motor vehicle crashes occurred on Thursday.

Figure 4.04 Day of Week for Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999



Note: The above graph is based on percentages for the different crash categories. To read the above graph, look at one category across the days of the week. For example, look at only the white bars (i.e. bicyclist-motor vehicle injury crashes) from day to day. Do not compare the heights of the different crash categories for a specific day.

Table 4.06 Day of Week for Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

| Day of Week | B-MV Total Crashes | | B-MV Injury Crashes | | B-MV Fatal Crashes | |
|-------------|--------------------|--------|---------------------|--------|--------------------|--------|
| | # | % | # | % | # | % |
| Monday | 56 | 7.0% | 48 | 6.6% | 1 | 16.7% |
| Tuesday | 108 | 13.4% | 99 | 13.5% | 1 | 16.7% |
| Wednesday | 130 | 16.2% | 117 | 16.0% | 1 | 16.7% |
| Thursday | 145 | 18.0% | 133 | 18.2% | 2 | 33.3% |
| Friday | 128 | 15.9% | 119 | 16.3% | 0 | 0.0% |
| Saturday | 140 | 17.4% | 127 | 17.3% | 1 | 16.7% |
| Sunday | 97 | 12.1% | 89 | 12.2% | 0 | 0.0% |
| Grand Total | 804 | 100.0% | 732 | 100.0% | 6 | 100.0% |

1999 Bicyclist-Motor Vehicle Crash Characteristics

The majority of total bicyclist-motor vehicle crashes and injury crashes occurred in urban areas (Table 4.07), however the majority of fatal bicyclist-motor vehicle crashes occurred in rural areas.

Table 4.07 Urban / Rural Location of Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

| Urban / Rural Location | B-MV Total Crashes | | B-MV Injury Crashes | | B-MV Fatal Crashes | |
|------------------------------------|--------------------|--------|---------------------|--------|--------------------|--------|
| | # | % | # | % | # | % |
| Rural Area - Up to 5,000 | 116 | 14.4% | 107 | 14.6% | 4 | 66.7% |
| Small Urban - 5,000 to 49,999 | 41 | 5.1% | 41 | 5.6% | 0 | 0.0% |
| Moderate Urban - 50,000 to 199,999 | 23 | 2.9% | 23 | 3.1% | 0 | 0.0% |
| Large Urban - 200,000 or More | 624 | 77.6% | 561 | 76.6% | 2 | 33.3% |
| Missing | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Grand Total | 804 | 100.0% | 732 | 100.0% | 6 | 100.0% |

Table 4.08 shows passenger cars were involved in over half (57.5%) of total bicyclist-motor vehicle crashes and injury crashes. For fatal crashes, pickup trucks/ vans were involved in the majority (83.3%) of the crashes.

Table 4.08 Type of Vehicles Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

| Vehicle Type | B-MV Total Crashes | | B-MV Injury Crashes | | B-MV Fatal Crashes | |
|---------------------|--------------------|--------|---------------------|--------|--------------------|--------|
| | # | % | # | % | # | % |
| Passenger Car | 465 | 57.5% | 427 | 57.9% | 0 | 0.0% |
| Pickup Truck / Vans | 317 | 39.2% | 285 | 38.7% | 5 | 83.3% |
| Unknown | 14 | 1.7% | 14 | 1.9% | 0 | 0.0% |
| Large Truck/Semi | 5 | 0.6% | 3 | 0.4% | 1 | 16.7% |
| Other | 3 | 0.4% | 3 | 0.4% | 0 | 0.0% |
| Motorcycle | 4 | 0.5% | 4 | 0.5% | 0 | 0.0% |
| School Bus | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| Grand Total | 809 | 100.0% | 737 | 100.0% | 6 | 100.0% |

Note: More than one vehicle may be involved in a bicyclist- motor vehicle crash. Unknown vehicles are 'hit and run' vehicles.

1999 Bicyclist-Motor Vehicle Crash Violations and Contributing Factors

Law enforcement officers at the scene cited 34.8% of drivers involved in a bicyclist-motor vehicle crash for a traffic violation. The leading violation was "improper look-out" (40.9%). There were three drivers involved in bicycle crashes that were cited for a "DUI" (Table 4.09).

Table 4.09 Violations for Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

| Violations | B-MV Total Crashes | | B-MV Injury Crashes | |
|---------------------------------|--------------------|--------|---------------------|--------|
| | # | % | # | % |
| Improper lookout | 114 | 40.9% | 112 | 40.9% |
| Failure to yield right-of-way | 106 | 38.0% | 104 | 38.0% |
| All other non-moving violations | 29 | 10.4% | 29 | 10.6% |
| Speeding | 6 | 2.2% | 6 | 2.2% |
| Hit and run | 4 | 1.4% | 4 | 1.5% |
| Improper turn | 4 | 1.4% | 4 | 1.5% |
| Negligent collision | 4 | 1.4% | 4 | 1.5% |
| Driving under the influence | 3 | 1.1% | 3 | 1.1% |
| Reckless driving | 2 | 0.7% | 2 | 0.7% |
| Red light | 2 | 0.7% | 2 | 0.7% |
| Stop sign | 2 | 0.7% | 2 | 0.7% |
| Improper start and stop | 1 | 0.4% | 0 | 0.0% |
| Improper passing | 1 | 0.4% | 1 | 0.4% |
| All other moving violations | 1 | 0.4% | 1 | 0.4% |
| Grand Total | 279 | 100.0% | 274 | 100.0% |

The factors contributing to bicycle-motor vehicle crashes are listed in Table 4.10. These factors were coded by the law officers at the scene for motor vehicles involved in the crash. The officer may record no contributing factor or up to two different contributing factors. The primary contributing factors recorded for total bicyclist-motor vehicle crashes and injury crashes were "improper lookout", "failure to yield right of way", and "hit and run". "DUI" and "had been drinking" accounted for 0.8% of contributing factors in total bicyclist-motor vehicle crashes and injury crashes.

Table 4.10 Contributing Factors of Bicyclist-Motor Vehicle (B-MV) Total Crashes and Injury Crashes, Utah 1999

| Contributing Factors | B-MV Total Crashes | | B-MV Injury Crashes | | B-MV Fatal Crashes | |
|----------------------------------|--------------------|--------|---------------------|--------|--------------------|--------|
| | # | % | # | % | # | % |
| Improper Lookout | 261 | 49.2% | 238 | 49.1% | 1 | 33.3% |
| Failed to Yield the Right of Way | 130 | 24.5% | 123 | 25.4% | 0 | 0.0% |
| Hit and Run | 56 | 10.5% | 49 | 10.1% | 0 | 0.0% |
| Other Improper Driving | 19 | 3.6% | 14 | 2.9% | 1 | 33.3% |
| Improper Turn | 16 | 3.0% | 16 | 3.3% | 0 | 0.0% |
| Speed Too Fast | 12 | 2.3% | 10 | 2.1% | 0 | 0.0% |
| Windshield Not Clear | 7 | 1.3% | 6 | 1.2% | 1 | 33.3% |
| Disregarded Traffic Signal | 6 | 1.1% | 6 | 1.2% | 0 | 0.0% |
| Passed Stop Sign | 5 | 0.9% | 5 | 1.0% | 0 | 0.0% |
| Following Too Closely | 3 | 0.6% | 3 | 0.6% | 0 | 0.0% |
| Failed to Signal | 3 | 0.6% | 3 | 0.6% | 0 | 0.0% |
| Driving Under the Influence | 2 | 0.4% | 2 | 0.4% | 0 | 0.0% |
| Improper Overtaking | 2 | 0.4% | 1 | 0.2% | 0 | 0.0% |
| Had Been Drinking | 2 | 0.4% | 2 | 0.4% | 0 | 0.0% |
| Headlights Glaring | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Eyesight Defective Uncorrected | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Ill | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Improper Backing | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Brakes Defective | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Towed Vehicle | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Wrong Way on One Way Street | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Grand Total | 531 | 100.0% | 485 | 100.0% | 3 | 100.0% |

1999 Drivers Involved in Bicyclist-Motor Vehicle Crashes

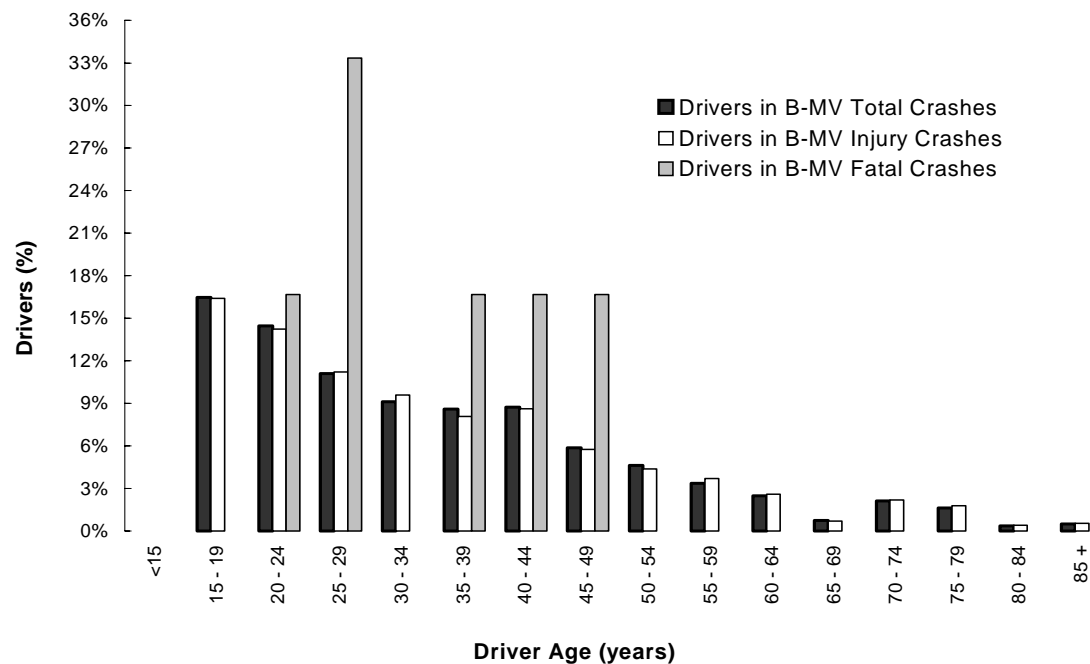
Drivers between the ages of 15 to 24 years represented the greatest percentage of motor vehicle drivers (31.0%) involved in a total bicyclist-motor vehicle crash, while drivers aged 25 to 29 years accounted for one-third of drivers (33.3%) involved in fatal bicyclist-motor vehicle crashes (Table 4.11).

Table 4.11 Age of Drivers Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

| Driver's Age | B-MV Total Crashes | | B-MV Injury Crashes | | B-MV Fatal Crashes | |
|--------------|--------------------|--------|---------------------|--------|--------------------|--------|
| | # Drivers | % | # Drivers | % | # Drivers | % |
| <15 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 15 - 19 | 132 | 16.5% | 120 | 16.4% | 0 | 0.0% |
| 20 - 24 | 116 | 14.5% | 104 | 14.2% | 1 | 16.7% |
| 25 - 29 | 89 | 11.1% | 82 | 11.2% | 2 | 33.3% |
| 30 - 34 | 73 | 9.1% | 70 | 9.6% | 0 | 0.0% |
| 35 - 39 | 69 | 8.6% | 59 | 8.1% | 1 | 16.7% |
| 40 - 44 | 70 | 8.7% | 63 | 8.6% | 1 | 16.7% |
| 45 - 49 | 47 | 5.9% | 42 | 5.7% | 1 | 16.7% |
| 50 - 54 | 37 | 4.6% | 32 | 4.4% | 0 | 0.0% |
| 55 - 59 | 27 | 3.4% | 27 | 3.7% | 0 | 0.0% |
| 60 - 64 | 20 | 2.5% | 19 | 2.6% | 0 | 0.0% |
| 65 - 69 | 6 | 0.7% | 5 | 0.7% | 0 | 0.0% |
| 70 - 74 | 17 | 2.1% | 16 | 2.2% | 0 | 0.0% |
| 75 - 79 | 13 | 1.6% | 13 | 1.8% | 0 | 0.0% |
| 80 - 84 | 3 | 0.4% | 3 | 0.4% | 0 | 0.0% |
| 85 + | 4 | 0.5% | 4 | 0.5% | 0 | 0.0% |
| Missing | 79 | 9.9% | 72 | 9.8% | 0 | 0.0% |
| Grand Total | 802 | 100.0% | 731 | 100.0% | 6 | 100.0% |

Note: More than one driver may be involved in bicyclist-motor vehicle crashes and driver information may be missing (e.g. a hit and run).

Figure 4.05 Age of Drivers Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999 (See Table 4.11 for values)



Note: The above graph is based on percentage for the different crash categories. To read the above graph, look at one category across the age groups. For example, look at only the white bars (i.e. drivers in bicyclist-motor vehicle injury crashes) from age group to age group. Do not compare the heights of the different crash categories for a specific age group.

Table 4.12 shows that half (50.6%) of motor vehicle drivers involved in total bicycle-motor vehicle crashes, and injury bicycle-motor vehicle crashes were male, but the majority of drivers in fatal crashes were male (83.3%).

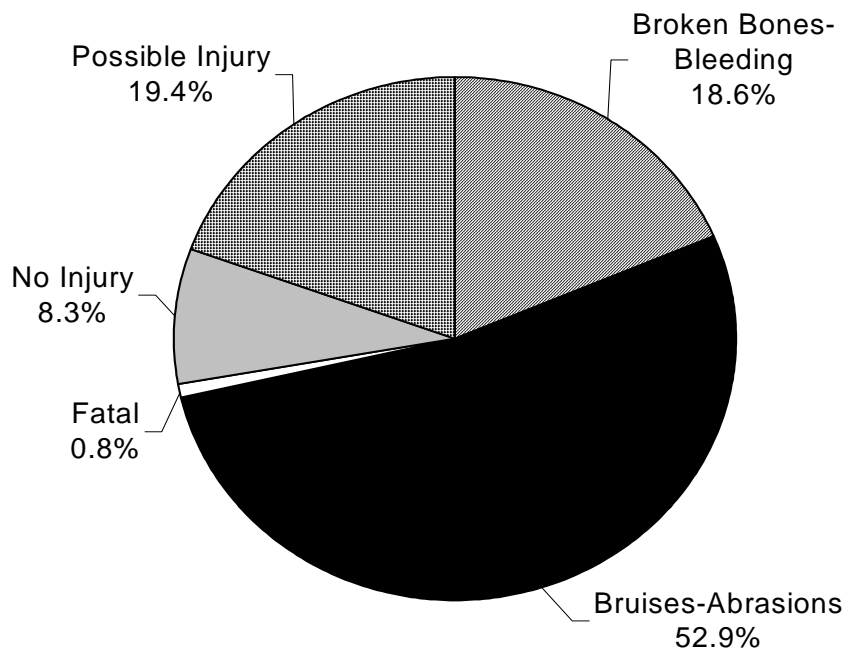
Table 4.12 Gender of Drivers Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

| Driver's Gender | B-MV Total Crashes | | B-MV Injury Crashes | | B-MV Fatal Crashes | |
|-----------------|--------------------|--------|---------------------|--------|--------------------|--------|
| | # Drivers | % | # Drivers | % | # Drivers | % |
| Female | 366 | 45.6% | 335 | 45.8% | 1 | 16.7% |
| Male | 406 | 50.6% | 369 | 50.5% | 5 | 83.3% |
| Missing | 30 | 3.7% | 27 | 3.7% | 0 | 0.0% |
| Grand Total | 802 | 100.0% | 731 | 100.0% | 6 | 100.0% |

1999 Bicyclist Injury Severity

Figure 4.06 shows that the majority of bicyclists sustained an injury (91.7%) compared to 21.7% of all motor vehicle crash participants. The percentage of bicyclist fatalities (0.8%) was higher than for all motor vehicle crash participants (0.3%). There were 6 bicyclists killed on Utah public roadways in 1999, compared to 9 bicyclists killed during 1998.

Figure 4.06 Bicyclist Injury Severity as Reported by Police, Utah 1999 (n=855)



1999 Bicyclists by County

Table 4.13 shows the number of bicyclists, injured bicyclists and bicyclist fatalities involved in motor vehicle crashes by county. While most bicyclists were involved in crashes occurring in Salt Lake County, this county did not have the highest rates per vehicle miles traveled. The leading county for total bicyclists and injured bicyclists involved in a motor vehicle crash per million vehicle miles traveled was Utah County.

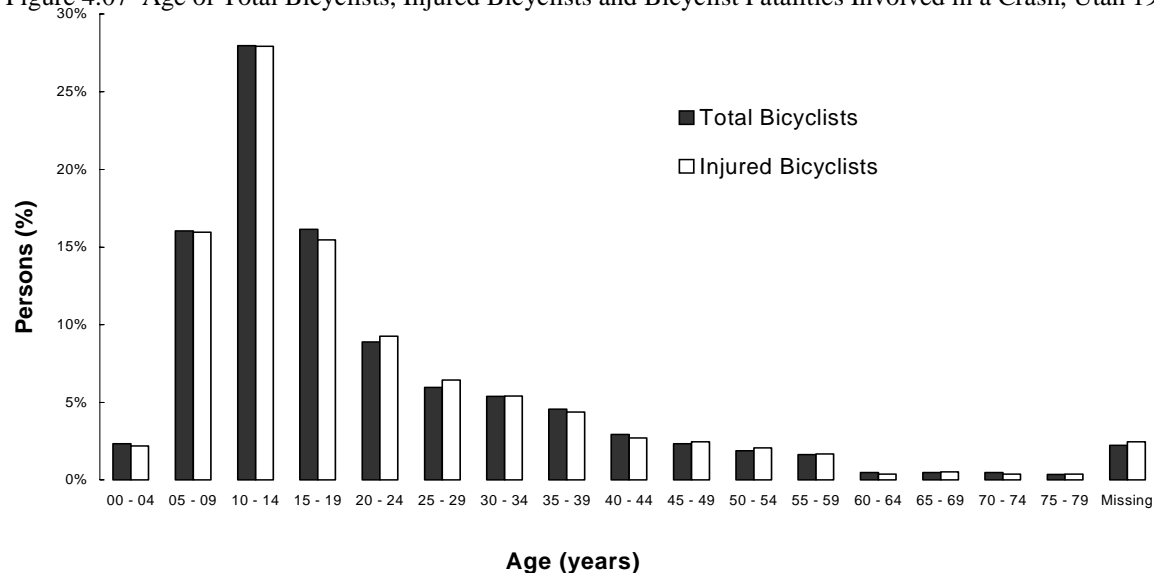
Table 4.13 Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities by County, Utah 1999

| County | Total Bicyclists | | | Injured Bicyclists | | | Bicyclist Fatalities | | |
|------------|------------------|-------------------|----------------------------|--------------------|-------------------|----------------------------|----------------------|----------------------|-----------------------------|
| | # | Rate per 100 MVMT | Rate Per 10,000 Population | # | Rate per 100 MVMT | Rate Per 10,000 Population | # | Rate per 10,000 MVMT | Rate Per 100,000 Population |
| Beaver | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Box Elder | 5 | 0.6 | 1.2 | 5 | 0.6 | 1.2 | 0 | 0.0 | 0.0 |
| Cache | 39 | 5.1 | 4.5 | 38 | 5.0 | 4.4 | 0 | 0.0 | 0.0 |
| Carbon | 5 | 1.4 | 2.3 | 5 | 1.4 | 2.3 | 0 | 0.0 | 0.0 |
| Daggett | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Davis | 75 | 3.7 | 3.4 | 69 | 3.4 | 3.1 | 0 | 0.0 | 0.0 |
| Duchesne | 4 | 2.2 | 2.8 | 4 | 2.2 | 2.8 | 0 | 0.0 | 0.0 |
| Emery | 1 | 0.3 | 0.9 | 1 | 0.3 | 0.9 | 0 | 0.0 | 0.0 |
| Garfield | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Grand | 7 | 2.5 | 7.4 | 6 | 2.2 | 6.3 | 1 | 36.3 | 10.6 |
| Iron | 10 | 1.8 | 3.4 | 10 | 1.8 | 3.4 | 0 | 0.0 | 0.0 |
| Juab | 3 | 0.9 | 3.9 | 2 | 0.6 | 2.6 | 0 | 0.0 | 0.0 |
| Kane | 1 | 0.8 | 1.5 | 1 | 0.8 | 1.5 | 0 | 0.0 | 0.0 |
| Millard | 1 | 0.2 | 0.8 | 1 | 0.2 | 0.8 | 0 | 0.0 | 0.0 |
| Morgan | 2 | 1.7 | 3.0 | 2 | 1.7 | 3.0 | 0 | 0.0 | 0.0 |
| Piute | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Rich | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Salt Lake | 419 | 5.8 | 5.0 | 373 | 5.2 | 4.5 | 4 | 5.6 | 0.5 |
| San Juan | 5 | 2.0 | 3.8 | 5 | 2.0 | 3.8 | 0 | 0.0 | 0.0 |
| Sanpete | 3 | 1.3 | 1.5 | 3 | 1.3 | 1.5 | 0 | 0.0 | 0.0 |
| Sevier | 3 | 0.8 | 1.6 | 3 | 0.8 | 1.6 | 0 | 0.0 | 0.0 |
| Summit | 3 | 0.5 | 1.2 | 3 | 0.5 | 1.2 | 0 | 0.0 | 0.0 |
| Tooele | 6 | 0.9 | 1.8 | 6 | 0.9 | 1.8 | 0 | 0.0 | 0.0 |
| Uintah | 5 | 1.8 | 2.1 | 4 | 1.5 | 1.7 | 1 | 36.7 | 4.1 |
| Utah | 181 | 6.2 | 5.6 | 167 | 5.7 | 5.1 | 1 | 3.4 | 0.3 |
| Wasatch | 6 | 2.5 | 4.6 | 6 | 2.5 | 4.6 | 0 | 0.0 | 0.0 |
| Washington | 20 | 2.4 | 2.6 | 20 | 2.4 | 2.6 | 0 | 0.0 | 0.0 |
| Wayne | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Weber | 51 | 3.4 | 2.8 | 43 | 2.9 | 2.4 | 0 | 0.0 | 0.0 |
| Statewide | 855 | 3.9 | 4.2 | 777 | 3.6 | 3.8 | 7 | 3.2 | 0.3 |

1999 Bicyclist Characteristics

Figure 4.07 and Table 4.14 show that most total bicyclists and injured bicyclists involved in a crash (60.1%) were between the ages of 5 to 19 years. This same age group represented almost half (42.9%) of the fatalities.

Figure 4.07 Age of Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities Involved in a Crash, Utah 1999



Note: The above graph is based on percentages for the different injury categories. To read the above graph, look at one category across the age groups. For example, look at only the white bars (i.e. injured bicyclist) from age group to age group. Do not compare the heights of the different injury categories for a specific age group.

Table 4.14 Age of Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities, Utah 1999

| Age | Total Bicyclists | | Injured Bicyclists | | Bicyclist Fatalities | |
|-------------|------------------|--------|--------------------|--------|----------------------|--------|
| | # | % | # | % | # | % |
| 00 - 04 | 20 | 2.3% | 17 | 2.2% | 0 | 0.0% |
| 05 - 09 | 137 | 16.0% | 124 | 16.0% | 1 | 14.3% |
| 10 - 14 | 239 | 28.0% | 217 | 27.9% | 1 | 14.3% |
| 15 - 19 | 138 | 16.1% | 120 | 15.4% | 1 | 14.3% |
| 20 - 24 | 76 | 8.9% | 72 | 9.3% | 0 | 0.0% |
| 25 - 29 | 51 | 6.0% | 50 | 6.4% | 0 | 0.0% |
| 30 - 34 | 46 | 5.4% | 42 | 5.4% | 1 | 14.3% |
| 35 - 39 | 39 | 4.6% | 34 | 4.4% | 2 | 28.6% |
| 40 - 44 | 25 | 2.9% | 21 | 2.7% | 1 | 14.3% |
| 45 - 49 | 20 | 2.3% | 19 | 2.4% | 0 | 0.0% |
| 50 - 54 | 16 | 1.9% | 16 | 2.1% | 0 | 0.0% |
| 55 - 59 | 14 | 1.6% | 13 | 1.7% | 0 | 0.0% |
| 60 - 64 | 4 | 0.5% | 3 | 0.4% | 0 | 0.0% |
| 65 - 69 | 4 | 0.5% | 4 | 0.5% | 0 | 0.0% |
| 70 - 74 | 4 | 0.5% | 3 | 0.4% | 0 | 0.0% |
| 75 - 79 | 3 | 0.4% | 3 | 0.4% | 0 | 0.0% |
| Missing | 19 | 2.2% | 19 | 2.4% | 0 | 0.0% |
| Grand Total | 855 | 100.0% | 777 | 100.0% | 7 | 100.0% |

The majority of the total bicyclists involved in crashes (77.1%) and all of the bicyclist fatalities were male (Table 4.15).

Table 4.15 Gender of Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities, Utah 1999

| Gender | Total Bicyclists | | Injured Bicyclists | | Bicyclist Fatalities | |
|---------------|-------------------------|----------|---------------------------|----------|-----------------------------|----------|
| | # | % | # | % | # | % |
| Female | 195 | 22.8% | 183 | 23.6% | 0 | 0.0% |
| Male | 659 | 77.1% | 593 | 76.3% | 7 | 100.0% |
| Missing | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| Grand Total | 855 | 100.0% | 777 | 100.0% | 7 | 100.0% |

The actions of the bicyclist prior to the crash are shown in Table 4.16. The leading total bicyclists and injured bicyclists actions prior to the crash were "riding in roadway with traffic" and "crossing at intersection with signal". For the bicyclists who died, more than half (57.1%) of the actions prior to the crash were "riding in roadway with traffic" .

Table 4.16 Bicyclist Action Prior to Crash, Utah 1999

| Bicyclist Action Prior to Crash | Total Bicyclists | | Injured Bicyclists | | Bicyclist Fatalities | |
|--|-------------------------|----------|---------------------------|----------|-----------------------------|----------|
| | # | % | # | % | # | % |
| Riding in Roadway With Traffic | 162 | 18.9% | 151 | 19.4% | 4 | 57.1% |
| Crossing Intersection with Signal | 144 | 16.8% | 129 | 16.6% | 0 | 0.0% |
| Crossing Intersection No Signal | 134 | 15.7% | 130 | 16.7% | 0 | 0.0% |
| Riding in Roadway Against Traffic | 131 | 15.3% | 114 | 14.7% | 0 | 0.0% |
| Crossing Intersection Against Signal | 89 | 10.4% | 77 | 9.9% | 3 | 42.9% |
| Crossing Not at Intersection | 79 | 9.2% | 72 | 9.3% | 0 | 0.0% |
| Riding on Sidewalk | 38 | 4.4% | 32 | 4.1% | 0 | 0.0% |
| Coming from Behind Parked Cars | 21 | 2.5% | 19 | 2.4% | 0 | 0.0% |
| Not Stated | 17 | 2.0% | 16 | 2.1% | 0 | 0.0% |
| Playing in Roadway | 15 | 1.8% | 15 | 1.9% | 0 | 0.0% |
| Other in Roadway | 8 | 0.9% | 7 | 0.9% | 0 | 0.0% |
| Not in Roadway | 6 | 0.7% | 4 | 0.5% | 0 | 0.0% |
| Crossing Intersection Diagonally | 3 | 0.4% | 3 | 0.4% | 0 | 0.0% |
| Other Standing in Roadway | 3 | 0.4% | 3 | 0.4% | 0 | 0.0% |
| Walking To or From School | 2 | 0.2% | 2 | 0.3% | 0 | 0.0% |
| Walking in Roadway Against Traffic | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| Other Working in Roadway | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| Walking on Sidewalk | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| Grand Total | 855 | 100.0% | 777 | 100.0% | 7 | 100.0% |

Alcohol and Other Drugs:

Of the 7 bicyclist fatalities, none were impaired by alcohol or other drugs. No impaired motor vehicle drivers were involved in fatal bicyclist-motor vehicle crashes.

Bicyclists and Helmet

Helmet was not coded consistently at the time-of-crash for bicyclists and cannot be reported with accuracy. As a result, it is not included in this summary.